

The RSDO News

May 2002

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A Message From the Chief of the RSDO

As most of you know, Bill Watson departed from the Rapid Spacecraft Development Office (RSDO) in February 2002, and is now serving as Program Executive for NASA's Office of Earth Science (Code Y). As the new RSDO Manager, I am pleased to report that business in the RSDO continues at a lively pace.

In February, RSDO awarded delivery orders for two Mission Accommodation Studies for the Solar Terrestrial Physics Program's Geospace Electrodynamic Connections (GEC) mission. The chosen vendors are carrying out those studies, which are scheduled for completion at the end of May. Currently, RSDO representatives are evaluating proposals for the design, fabrication, and launch of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Preparatory Project (NPP). More information on these two endeavors can be found in corresponding articles in this newsletter. We are also in the midst of preparing the final Request For Offer (RFO) for the Structure and Evolution of the Universe Program's Gamma Ray Large Area Space Telescope (GLAST) mission, and expect to release the RFO this spring.

The RSDO assumed responsibility for the Access To Space (ATS) web site earlier this year, and Bruce Clark has been working with our contractor staff to ensure that the site is kept up to date. Look for an overview of the ATS web site and its goals in this issue.

In addition to the ongoing formal mission studies and spacecraft bus procurements, the RSDO team has been busy supporting requests for

mission applicability studies. During these studies, our staff assesses a particular mission's requirements, and determines if RSDO can identify candidate solutions. Frequently, we find that one or more of the spacecraft buses offered in the RSDO catalog are feasible for the customer to utilize.

Finally, RSDO representatives are making plans to attend two upcoming aerospace community conferences:

- 2002 Small Payloads Rideshare Conference in Albuquerque, NM, on June 5-6
- 16th Annual Conference on Small Satellites in Logan, UT, on August 12-15

These meetings will be ideal opportunities for us to market RSDO services, and assess the present and future requirements of our potential customers.

I look forward to working with the RSDO customer community, the vendors, and the RSDO staff in our quest to facilitate the spacecraft procurement process through innovative means. As always, if you have comments or questions regarding the RSDO web site, or any of our business processes or programs, please feel free to contact me (<mailto:gregory.f.smith.1@gsfc.nasa.gov> or 301-286-1289).

Greg

Staffing Updates

New Chief Heads RSDO

In February 2002, Gregory F. Smith became the new Chief of the Rapid Spacecraft Development Office at the National Aeronautics and Space Administration's Goddard Space Flight Center.

Greg has a wealth of civil service experience in both the Department of Defense and NASA environments. After graduating from the U.S. Air Force (USAF) Academy in 1977, Greg served in the Air Force for eleven and a half years. He first worked as a Missile Launch Officer in the USAF Strategic Air Command, and then cross-trained into Communications-Electronics, and was assigned to the Shuttle Activation Task Force, and later the 6595th Shuttle Test Group, at Vandenberg Air Force Base. At Vandenberg, Greg served as the Branch Chief of Communications Systems for the development and activation of the Shuttle Launch Site. In his last Air Force assignment, Greg worked at GSFC, as the USAF Liaison to NASA for implementation of the secure communications operations facility to support Department of Defense Shuttle missions. Additionally, Greg served as the USAF/NASA Instrument Manager for the Television Infrared Observation Satellite (TIROS) Project.

In 1988, Greg joined the NASA GSFC team as an Instrument Manager for the TIROS (now Polar Operational Environmental Satellite (POES)) Project. In 1992, he was appointed the Flight Manager for the Earth Observing System's (EOS) Chemistry and Special Flights Project. In that capacity, he managed as many as five missions during the Formulation Phase of the mission life cycle, where mission definition

and preliminary design are completed. In 1996, Greg became Deputy Project Manager for the Ice, Cloud and Land Elevation Satellite (ICESat) Project, a benchmark EOS mission designed to measure the properties of clouds and ice sheets, and provide land topography information. Greg held that position until last February, when he was selected to become Chief of the RSDO.

Greg also serves on GSFC's Project Management Development Emprise Advisory Board (PMDE)-a management training program for mid-level GSFC Civil Servants who have shown the desire and aptitude for program/project management. Greg was a member of the first PMDE class selected in 1990, and now, as a PMDE Advisory Board member, he helps select PMDE candidates, evaluate participants' performances, and approve candidate graduations from the PMDE program.

In addition to his technical and management experience, Greg holds a Masters Degree in Management Information Systems from West Coast University in Los Angeles, California. Welcome to RSDO, Greg!

CO's Corner

On-ramp Augments Rapid II Catalog

The RSDO recently announced the addition of three new spacecraft to the array of buses available under the Rapid II spacecraft acquisition contract. Two of the new spacecraft are from vendors who already offer buses under Rapid II. NASA accepted proposals for the LeoStar-2 bus built by the Orbital Science Corporation of Dulles, Virginia, and the T-310 spacecraft offered by the TRW Space and Electronics Programs Division based in Redondo Beach, California. The RSDO also awarded a Rapid II contract to a new company-Astrium GmbH, of Friedrichshafen, Germany-whose FlexBus spacecraft will be added to the Rapid II catalog.

These contract additions were made possible by the Rapid II contract's unique on-ramp feature, which provides vendors with the opportunity to submit proposals for new Rapid II contracts or for modification of existing contracts. Thus, on-ramps allow the addition of new core buses to Rapid II, and enable vendors to offer further options on the buses already available under Rapid II. The Rapid II contract provides for two on-ramp opportunities per calendar year; in practice, we are holding only one per year.

Don't Forget

Please remember to consider small or disadvantaged businesses when selecting your new subcontractors. Making this effort may even enable you to meet the Small and Disadvantaged Business (SDB) goals contained in your RSDO IDIQ contract.

New Business

GEC Studies in Progress

At the end of February 2002, NASA awarded two delivery orders for Geospace Electrodynamic Connections (GEC) Mission Accommodation Studies. The studies-currently being conducted by Spectrum Astro Incorporated and Orbital Sciences Corporation-are scheduled for completion by the end of May 2002.

The GEC is a road-mapped, funded, cost capped project for the Space Science Enterprise, and is managed by NASA's Solar Terrestrial Probes (STP) program at GSFC. The GEC mission will enable scientists to study complex multi-scale coupling between Earth's magnetosphere and Ionosphere-Thermosphere (I-T) regions by providing multi-spacecraft in-situ measurements of plasma/neutral properties in the I-T region. The four identical GEC mission spacecraft, carrying duplicate sets of nine instruments, are scheduled to launch on a single Delta II 2920 in September 2009. The spacecraft will be variably spaced in an elliptical parking orbit, placing the constellation into a "Pearls-On-a-String" configuration (~185 km by 2000 km) with a dipping capability to ~ 130 km at a relatively high inclination (83°).

Additional details regarding the GEC mission are available online at the <http://stp.gsfc.nasa.gov/missions/gec/gec.htm> web site.

NPP Proposals Received

On March 4, 2002, the RSDO released a Request For Offer (RFO) for final design, fabrication, integration, test, launch, and early orbit operations support of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Preparatory Project (NPP). NPP is a joint mission of NASA and the NPOESS Integrated Program Office, involving representatives from the National Oceanographic and Atmospheric Administration, the Department of Defense, and NASA.

Planned for launch in 2005, NPP will provide critical climate research observations bridging the Earth Observing System (EOS) Terra and Aqua missions and the NPOESS missions. NPP will also provide risk reduction and validation for three of four critical sensors slated for use on the NPOESS missions.

In response to the RFO, the RSDO received NPP proposals from vendors by the April 4 due date. The RSDO and NPP are currently evaluating proposals; delivery order award is planned for early June.

Other RSDO News

The "Access To Space" Web Site... Providing a Ride to the Future

QUESTION: If you were a scientist or mission planner trying to figure out the best way to launch your payload into space, where could you go to investigate your options?

ANSWER: You could visit the Access To Space (ATS) web site (<http://accesstospace.nasa.gov/>).

The ATS web site, which is maintained by the RSDO, is designed to provide a wide array of technical information, and to link parties needing a ride into space with those who can provide space access.

Previously, GSFC's Systems, Technology, and Advanced Concepts Directorate (STAAC) maintained the ATS site. When NASA dissolved STAAC in late 2001, NASA and the other ATS site sponsors determined that there was still a need for the site. The RSDO, whose mission is particularly complementary to that of ATS, assumed responsibility for the ATS site. The site is kept up to date by a group led by Steve Brower and Derek Surka of a.i. solutions, Inc., the company initially responsible for the design and implementation of the site.

The ATS web site is divided into several user-friendly sections. In the Mission Database section, mission planners from all over the world list their upcoming missions in the site's Mission Opportunities Database. The database contains information about instruments, spacecraft, and manifested launches at various stages in the mission life cycle, from initial concept development to manifested launch. Site users can search the database using several different criteria to find out if any

upcoming missions or future concepts may fit their needs. Using this feature of the site, mission planners can identify potential cooperative opportunities.

The site's Access Mode Information section provides users with information about specific space access modes. Mission planners can view the technical specifications of numerous Expendable Launch Vehicles (ELV), Re-usable Launch Vehicles (RLV), spacecraft buses, Shuttle carrier systems, sounding rockets, sub-orbital vehicles, and balloon vehicles.

There is a Tools section that enables users to perform further trade analyses. By inputting a particular mission's requirements (target orbit, mass, power requirements, etc.) users can investigate different ELV and Shuttle carrier options that are suitable for that mission. The site also contains a Flight Dynamics tool set, which users can utilize to analyze spacecraft lifetime, Sun/shadow predicts, ground station contacts, XY plots of orbital parameters, and Mercator Plots.

In addition, the site provides several "gateways" that display links to other web sites containing information on a variety of topics, including advancements in aerospace technologies, launch manifests, educational outreach, and more.

The ATS site is publicly accessible, but frequent users may wish to register, so that they receive weekly email notification of changes or updates to the site. There is a wealth of valuable information available on the Access To Space web site-come and check it out!

By Lena Braatz/Booz Allen Hamilton

RSDO Roadmap Updated!

The RSDO Roadmap has recently been updated. In March, we altered the Roadmap to reflect recent changes in launch and milestone dates for numerous NASA Earth and Space Science Enterprise missions. The RSDO Roadmap illustrates the Rapid Spacecraft Development Office's current and potential future involvement with NASA missions.

Numerous types of RSDO activities are depicted, including study performance, spacecraft acquisition, and participation in meetings and conferences. The Roadmap is also a useful tool for customers and vendors to identify and plan for future activities and opportunities. Several modifications have been made since the last update in May 2001. A few of the major changes are highlighted as follows:

- The Rapid III preparation and contract dates are updated.
- All mission launch and implementation dates are updated to coincide with those specified in the SOCB Mission Set (3/1/02 Draft).
- The UnESS Program was removed due to lack of funding.
- The MIDEX and SMEX AO release schedules are updated.
- The UNEX portion of the Explorer Program was removed due to no planned AO releases or missions.
- The NPP, GEC, and GLAST RFO milestone dates are updated.
- The 'Conferences and Symposiums' section of the Roadmap is updated with new upcoming events.

You can review these updates and more in the current RSDO Roadmap at <http://rsdo.gsfc.nasa.gov/newsletter/roadmap1.cfm>.

By David Bissett/Booz Allen Hamilton